ENDOCRINE CLINICAL EXAMINATION

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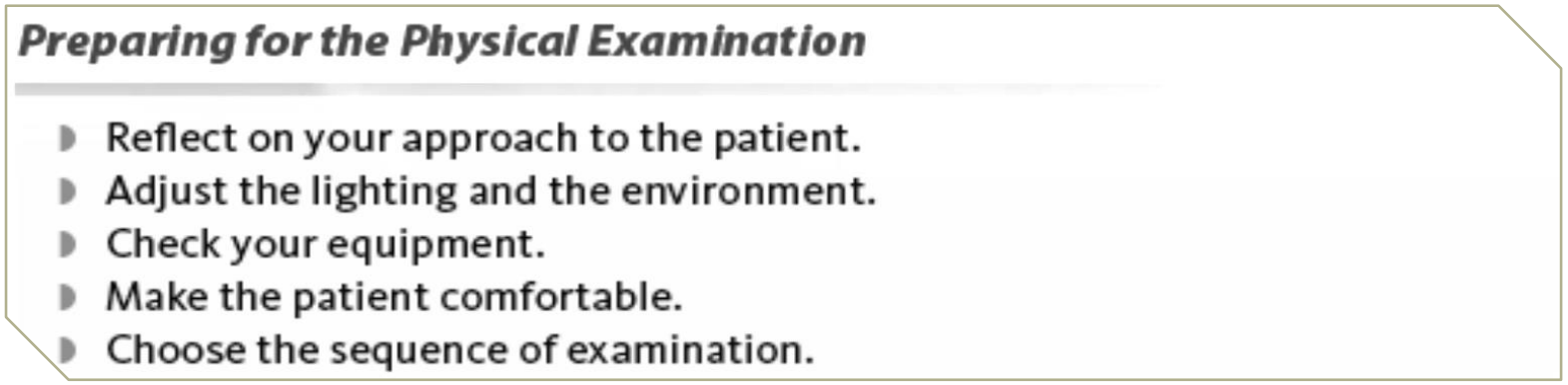
- Before you begin the physical examination, take time to prepare for the tasks ahead…



- Organize your comprehensive or focused examination around three general goals:
  - Maximize the patient's comfort.
  - Avoid unnecessary changes in position.
  - Enhance clinical efficiency.

- In general, move from "head to toe."

Equipment for the Physical Examination

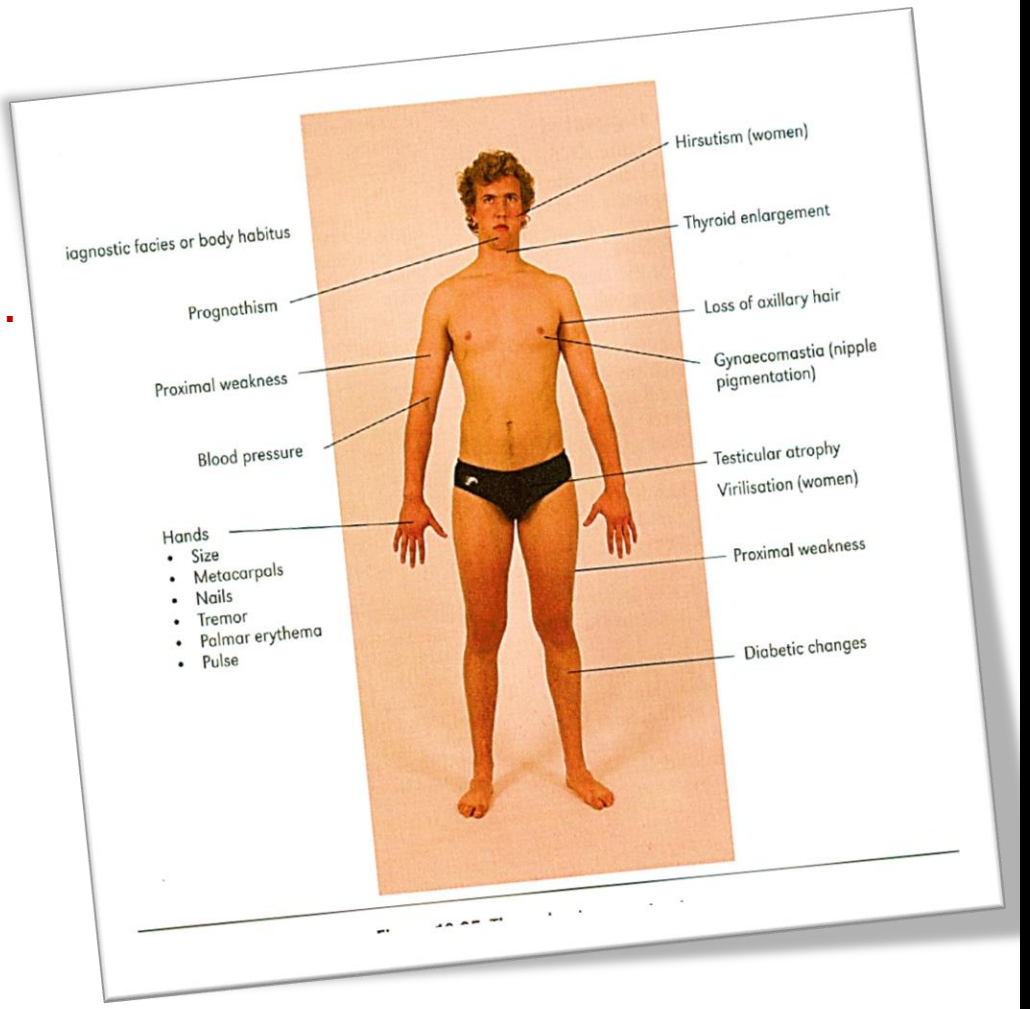
- An ophthalmoscope and an otoscope. If you are examining children, the otoscope should allow for pneumatic otoscopy.
- A flashlight or penlight
- Tongue depressors
- A ruler and flexible tape measure, preferably marked in centimeters
- Often a thermometer
- A watch with a second hand
- A sphygmomanometer

- A stethoscope with the following characteristics:
  - Ear tips that fit snugly and painlessly. To get this fit, choose ear tips of the proper size, align the ear pieces with the angle of your ear canals, and adjust the spring of the connecting metal band to a comfortable tightness.
  - Thick-walled tubing as short as feasible to maximize the transmission of sound: approximately 30 cm (12 inches), if possible, and no longer than 38 cm (15 inches)
  - A bell and a diaphragm with a good changeover mechanism
- Gloves and lubricant for oral, vaginal, and rectal examinations
- Vaginal specula and equipment for cytologic and perhaps bacteriologic study
- A reflex hammer
- Tuning forks, ideally one of 128 Hz and one of 512 Hz
- Q-tips, safety pins, or other disposable objects for testing sensation and two-point discrimination
- Cotton for testing the sense of light touch
- Two test tubes (optional) for testing temperature sensation
- Paper and pen or pencil, or desktop or laptop computer

Overview OF The Physical Examination

- Read carefully this "head-to-toe" sequence, the techniques for examining each region of the body, and how to optimize patient comfort …

- ✓ **General Survey…**
- ✓ **Vital Signs…**
- ✓ **Skin, Nails…**
- ✓ **Head, Eyes, Ears, Nose, Throat …**
- ✓ **Neck…**
- ✓ **Posterior Thorax and Lungs…**
- ✓ **Breasts, Axillae…**
- ✓ **Anterior Thorax and Lungs….**
- ✓ **Cardiovascular System...**
- ✓ **Abdomen...**
- ✓ **Lower Extremities…**
- ✓ **Nervous System…**
- ✓ **Additional Examinations...**



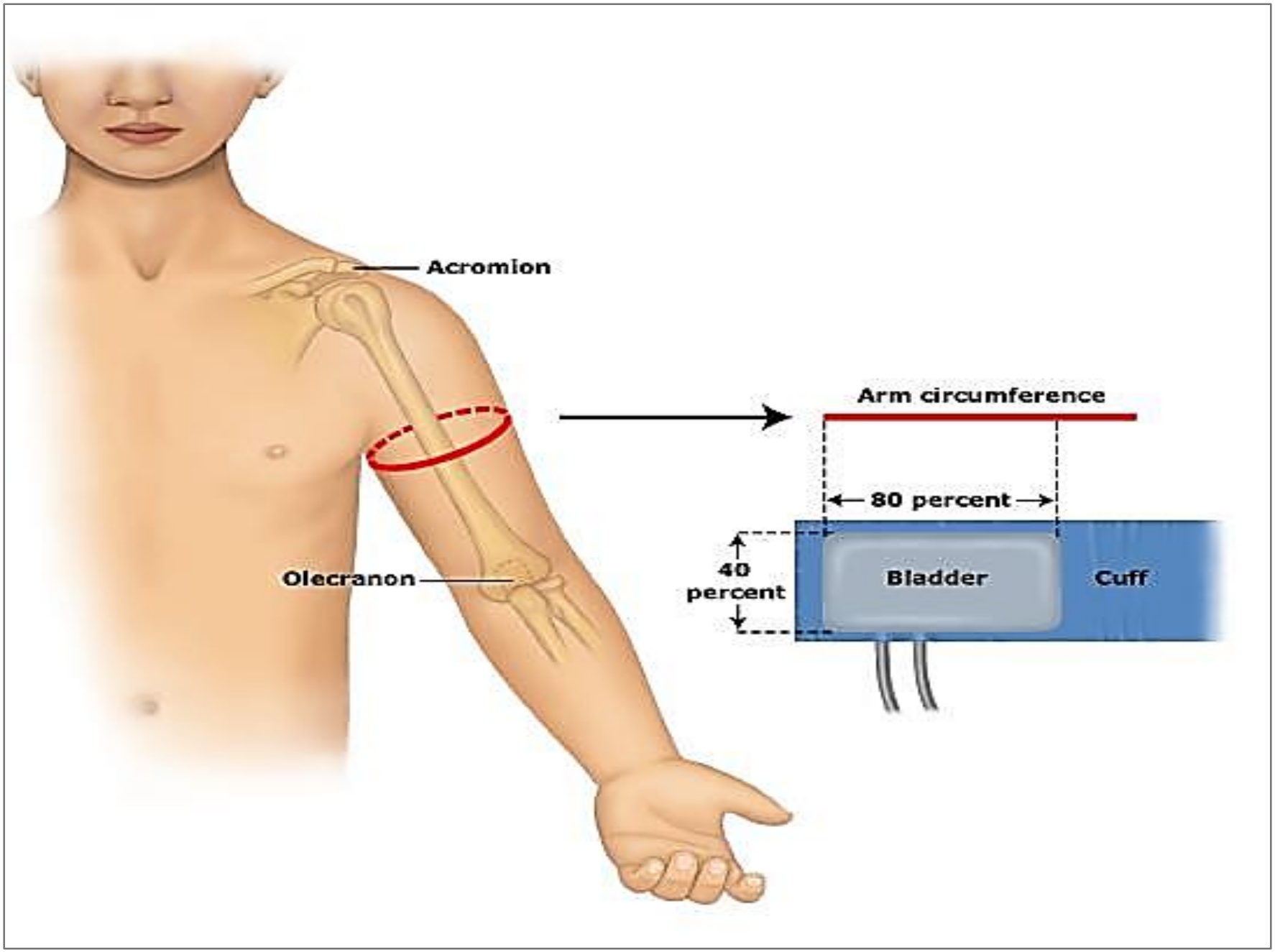
❖ GENERAL APPEARANCE & VITAL SIGNS…

- ✓ **Height**
- ✓ **Weight**
- ✓ **BMI**
- ✓ **&…**

Pulse
- ↑ (Hyperthyroidism, Hypoglycemia…)
- ↓ (Hypothyroidism, Hypopituitarism…)

BP
- ↑ (Hyperaldosteronism, Pheochromocytoma…)
- ↓ (Addison's disease, Hypopituitarism…)

RR → Hyperventilation → DKA


Acromion
Olecranon
Arm circumference
80 percent
40
percent
Bladder
Cuff

❖ SKIN & HAND & HEAD & EYES & MOUTH

- Heat (hyperthyroid).
- Tremor (hyperthyroid).
- Palmar erythema (hyperthyroid).
- Pigmentation of palmar crease (Addison's).
- 3rd, 5th metacarpals shortened (pseudohypoparathryoid).
- Pulse: rate (hyper-, hypothyroid), rhythm,…
- Oversized hands (acromegaly).
- Tongue enlargement (acromegaly).
- Chin enlargement (acromegaly).
- Eye fundus:(DM , acromegaly).
- Exophthalmos (hyperthyroid).
- Acne, oily skin (Cushing's).
- Buccal pigmentation (Addison's).
- Hirsutism...

❖ NECK & THYROID

- Inspect buffalo hump (Cushing's).
- Palpate supra-clavicular fat pads (Cushing's).
- Inspect webbed neck (Turner's).
- Inspect for goiter…

Techniques: Thryroid Exam

There are several physical examination maneuvers described for examination of the thyroid described below that are at least moderately sensitive and specific. Much of the exam is based on physiological reasoning and tradition rather than on studies of reliability or precision. Combining the examination and association signs and symptoms increases the **accuracy of the physical examination of the thyroid**.

Goiter: Examination of the thyroid for size

Note: An enlarged thyroid is referred to as a goiter. There is no direct correlation between size and function- a person with a goiter can be euthyroid, hypo- or hyperthyroid.

A normal thyroid is estimated to be 10 grams with an upper limit of 20 grams or 2 to 4 teaspoons.

Examination for goiter can increase the possibility of thyroid disease in patients with symptoms of hypo- or hyperthyroidism, in determining the choice of treatment in hyperthyroidism and monitoring the response to therapy directed at decreasing the size of the thyroid in cases of symptomatic goiter.

The examination consists of three portions:

- Inspection,
- Palpation, and
- Synthesis of data from these techniques

In addition to palpating for size, also note the gland texture, mobility, tenderness and the presence of nodules.

Inspection

Inspection: Anterior Approach

1. The patient should be seated or standing in a comfortable position with the neck in a neutral or slightly extended position.
2. Cross-lighting increases shadows, improving the detection of masses.
3. To enhance visualization of the thyroid, you can:
    1. Extending the neck, which stretches overlying tissues
    2. Have the patient swallow a sip of water, watching for the upward movement of the thyroid gland.
4.  251KB video demo from Return to the Bedside

Inspection: Lateral Approach

1. After completing anterior inspection of the thyroid, observe the neck from the side.
2. Estimate the smooth, straight contour from the cricoid cartilage to the suprasternal notch.
3. Measure any prominence beyond this imagined contour, using a ruler placed in the area of prominence.

Palpation: Anterior Approach

1. The patient is examined in the seated or standing position.
2. Attempt to locate the thyroid isthmus by palpating between the cricoid cartilage and the suprasternal notch.
3. Use one hand to slightly retract the sternocleidomastoid muscle while using the other to palpate the thyroid.
4. Have the patient swallow a sip of water as you palpate, feeling for the upward movement of the thyroid gland.
5. 454KB video demo from Return to the Bedside.

Palpation: Posterior Approach

1. The patient is examined in the seated or standing position.
2. Standing behind the patient, attempt to locate the thyroid isthmus by palpating between the cricoid cartilage and the suprasternal notch.
3. Move your hands laterally to try to feel under the sternocleidomstoids for the fullness of the thyroid.
4. Have the patient swallow a sip of water as you palpate, feeling for the upward movement of the thyroid gland.

Note: This traditional technique is based on physiological reasoning; data of effectiveness is lacking.

Nodules: Examination of the thyroid for nodularity

Thyroid nodules are common (prevalence 4%). Half of the thyroids glands examined by ultrasound or direct visualization (surgery or autopsy) have nodules. Physical examination detects approximately 10% of the nodules found by these methods. Nodules increase in frequency with age and are four times more likely in women than men. Less than 5% of all nodules are cancerous.

Technique

1. The **location** of the thyroid is identified by inspection.
2. **Using the anterior or posterior approach**, palpate the thyroid to identify nodules
3. Note the **size and number** of nodules.
4. Note the **consistency** of the nodule.
5. Palpate **regional lymph nodes for consistency and mobility**.
6. **Take a look at a teaching demo video.**

❖ AXILLAE & ARMS

- Acanthosis nigricans (acromegaly).
- Axillary hair loss (hypopituitary).
- Skin tags (acromegaly).
- Blood pressure for hypertension (Cushing'),
- Trousseau's sign (hypercalcemia):
    1) Occlude brachial artery for 3 min using BP cuff...
    2) See if carpal spasm is induced.
- Muscle weakness (hypothyroid, Cushing's).

❖ CHEST & ABDOMEN

- Pigmented nipple (Addison's).
- Loss or gain of chest hair…
- Male gynecomastia...
- Reduced female breast size (panhypopituitary).
- Pt. lies down, one pillow under head.
- Purple striae (Cushing's).
- Disproportionate abdominal fat (Cushing's).

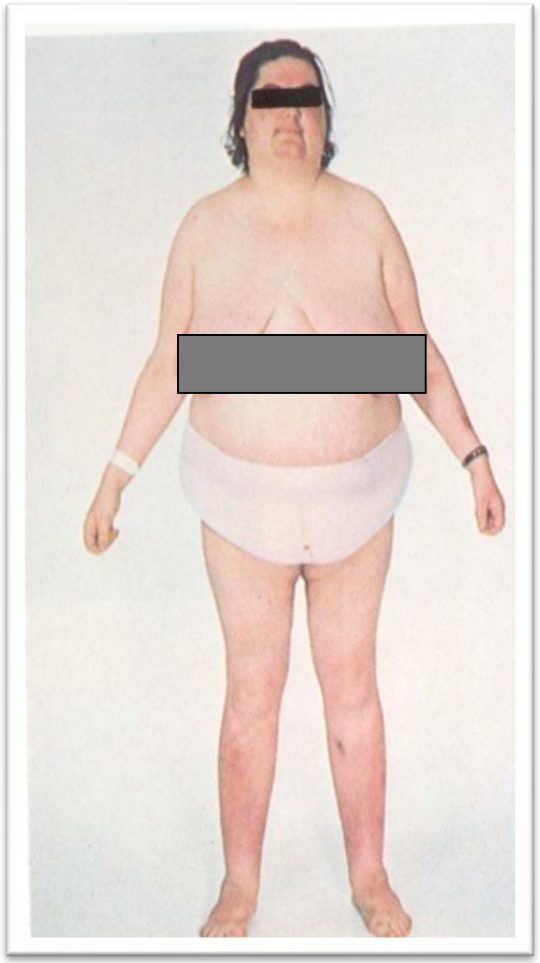
❖ GENITALIA

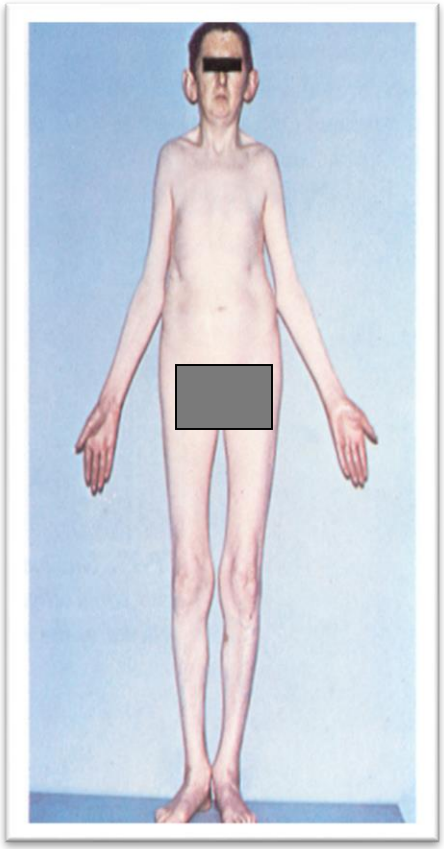
- Atrophy…
- Virilisation...

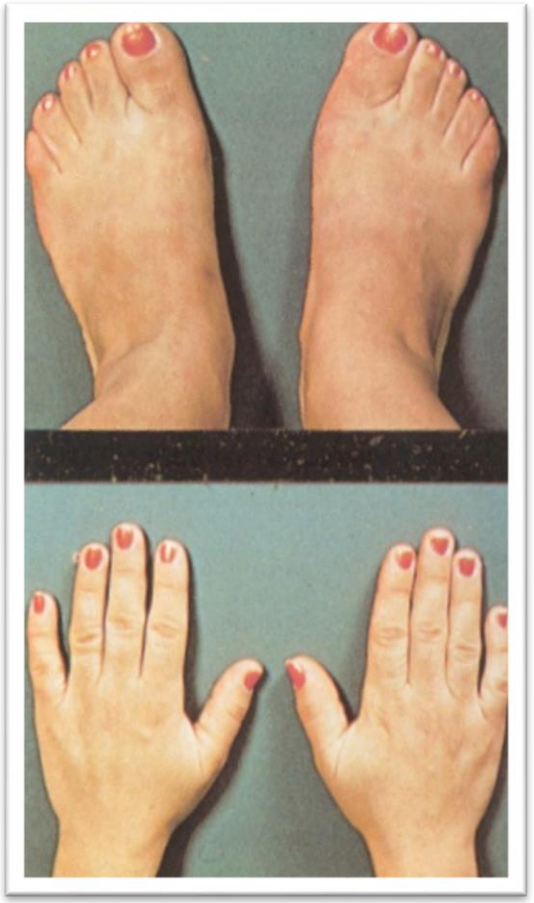
❖ LEGS

- Peripheral neuropathy (DM).
- Toe nails and foot showing same symptoms…

BODY SIZE AND PROPORTIONS







Eunuchoidism

SKIN AND NAILS

Thyroid achropachy

Hypoparathyroidism

Cushing’s

Hyperthyroid…

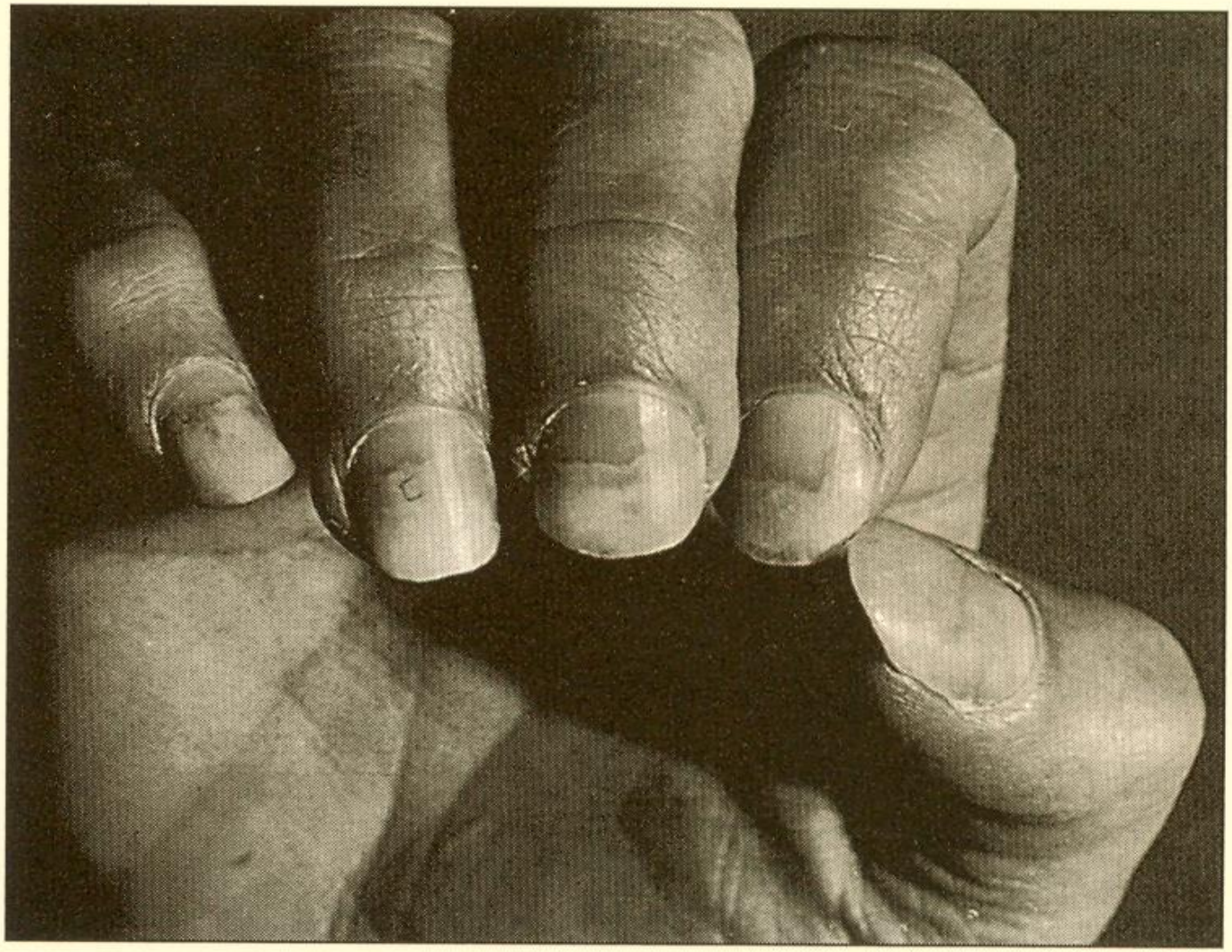
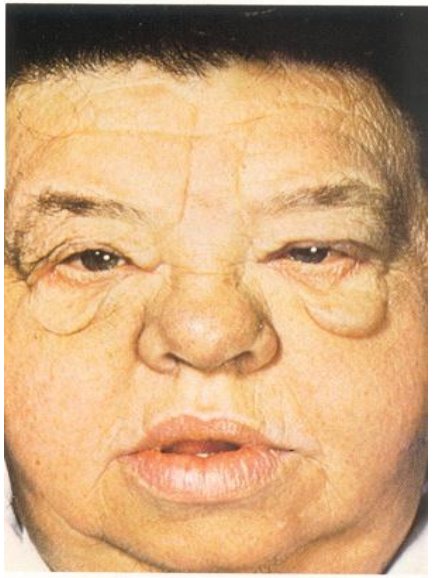


Figure 10.6 Onycholysis (Plummer's nails)

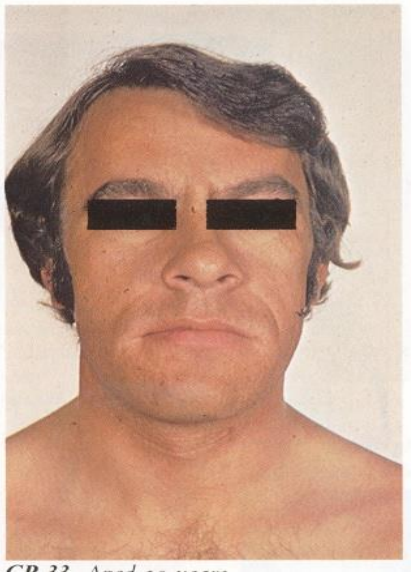
FACE AND EYES

Hyperthyroid



Hypothyroid

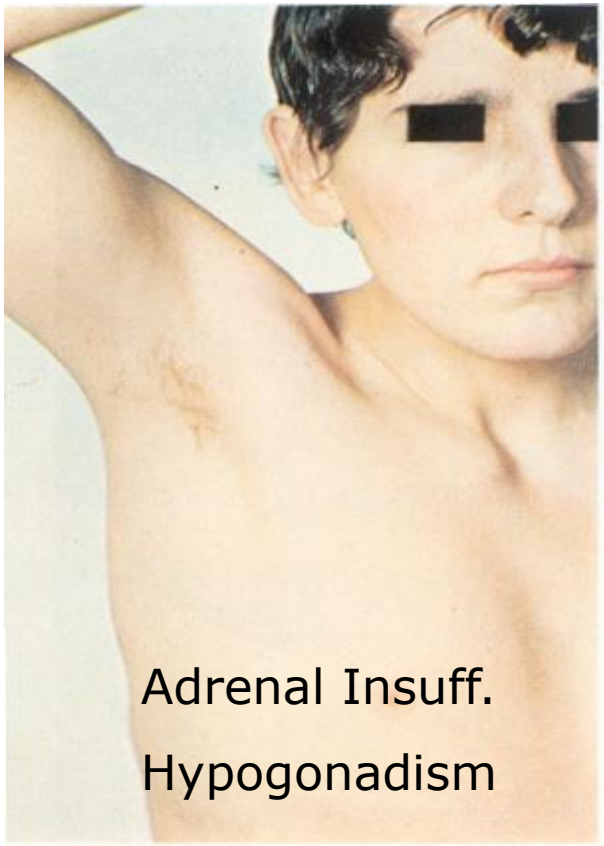
Cushing's



Acromegaly

Figure 16-30 Acanthosis nigricans. **A,** Moderate acanthosis nigricans (darkening and thickening of skin) at the lateral lower fold of the neck. Note facial hirsutism (sideburns) in the same patient. **B,** Severe acanthosis nigricans in another patient with severe insulin resistance. *(B Courtesy of Dr. R. Ann Word, Dallas, TX.)*

HAIR

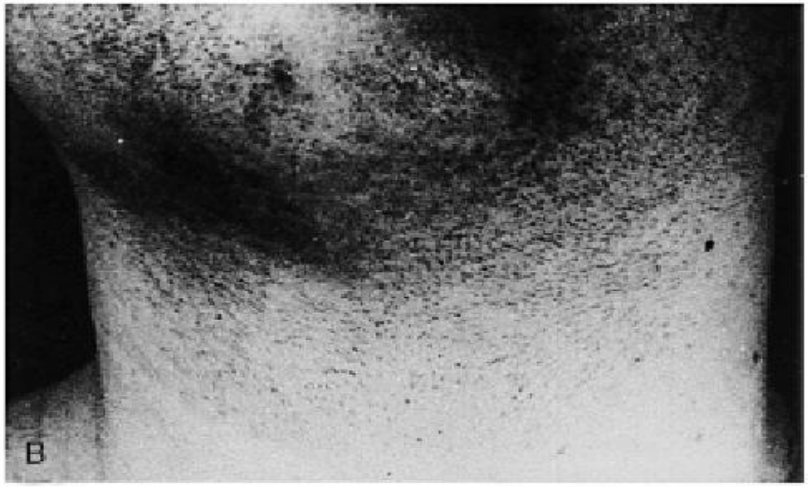


Adrenal Insuff.

Hypogonadism

Hypothyroidism

Virilization



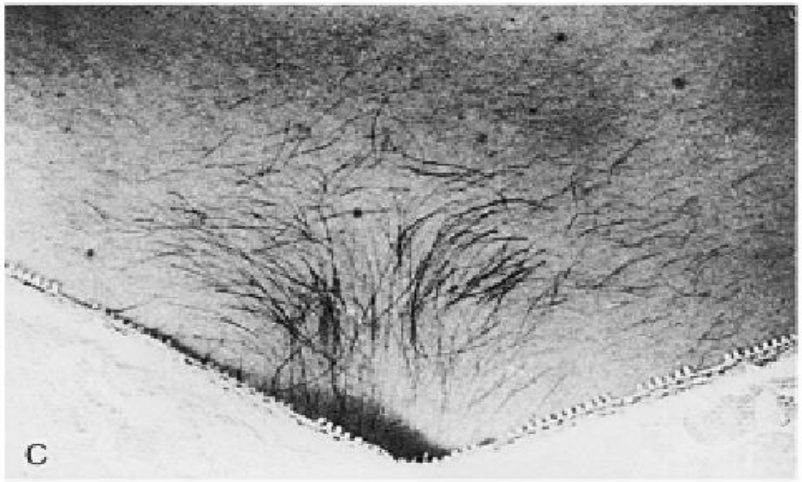
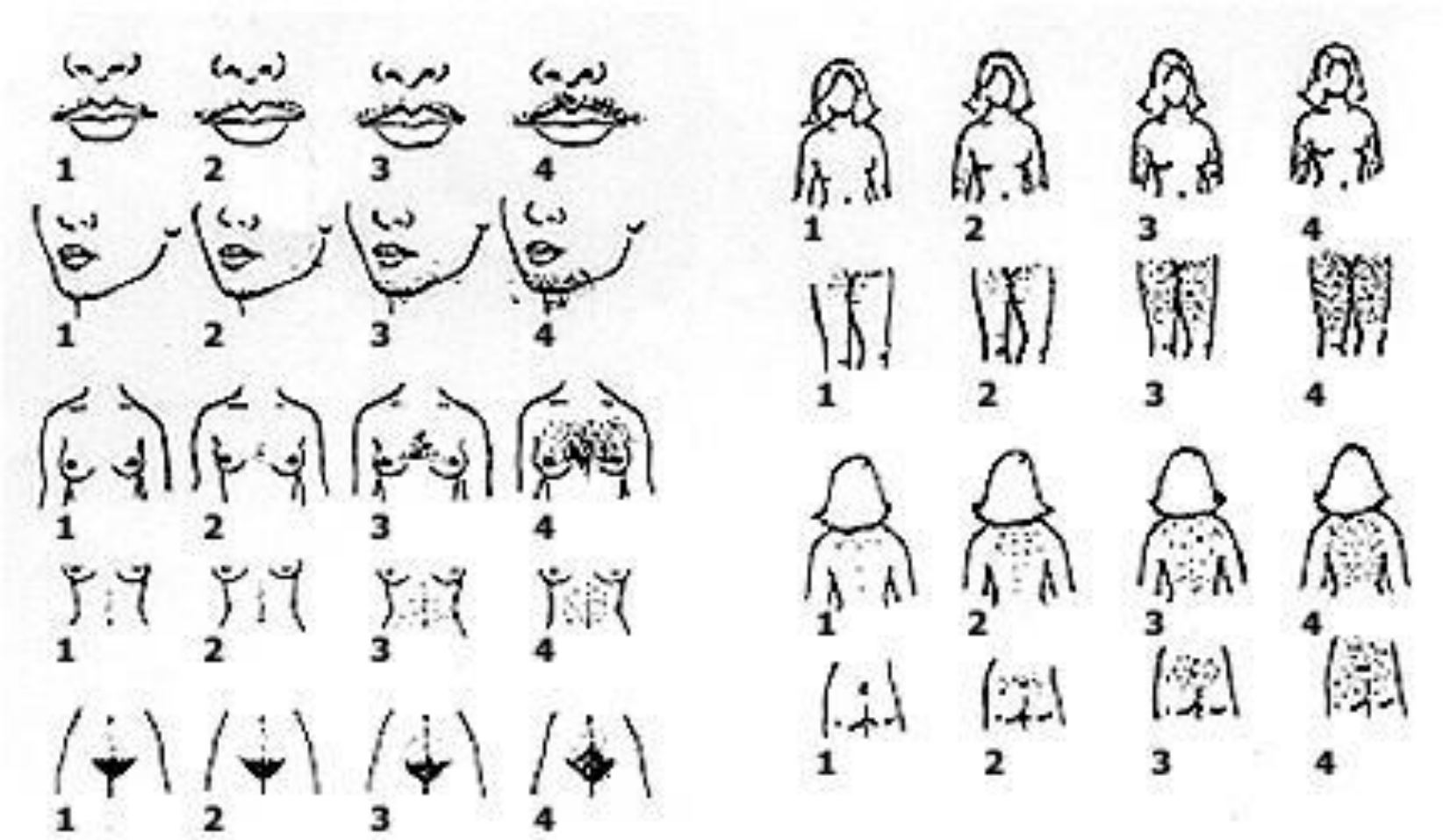


Figure 16-26 Hirsutism. **A,** Mild facial hirsutism. **B,** Severe facial hirsutism (chin), which requires regular shaving. **C,** Severe hirsutism on chest. *(B and C from Dunaif A, Hoffman AR, Scully RE, et al. The clinical, biochemical and ovarian morphologic features in women with acanthosis nigricans and masculinization. Obstet Gynecol 1985;66:545-552.)*

Grading of severity of hirsutism in women



- Hirsutism scoring standards at different sites showing the spectrum from minimal hirsutism (grade 1) to frank virilization (grade 4)…

Typical clinical features

Acromegaly

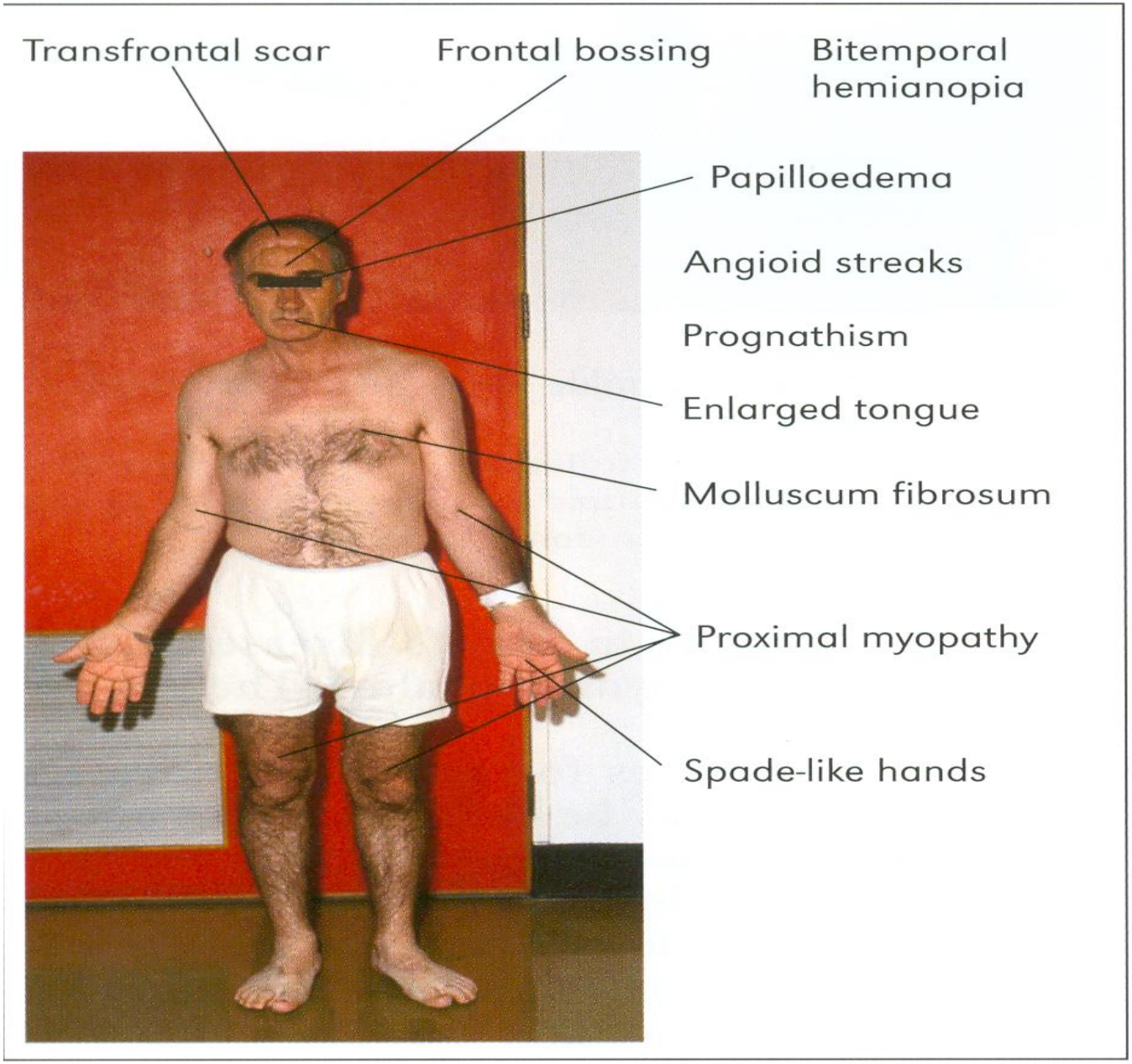
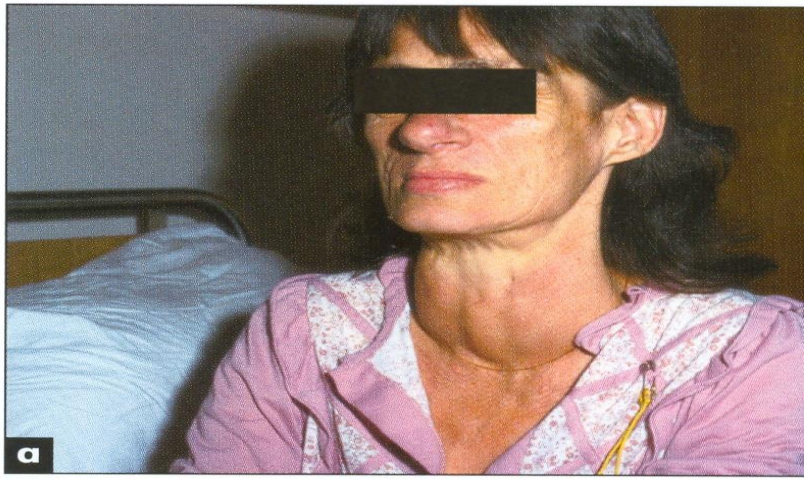


Figure 10.9 Acromegaly

Typical clinical features

Hypothyroidism



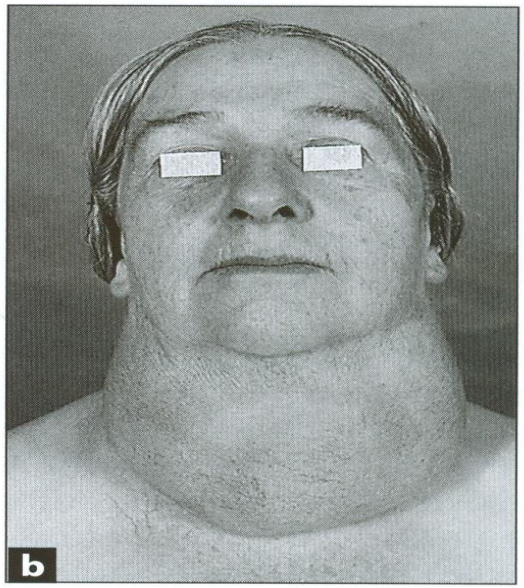
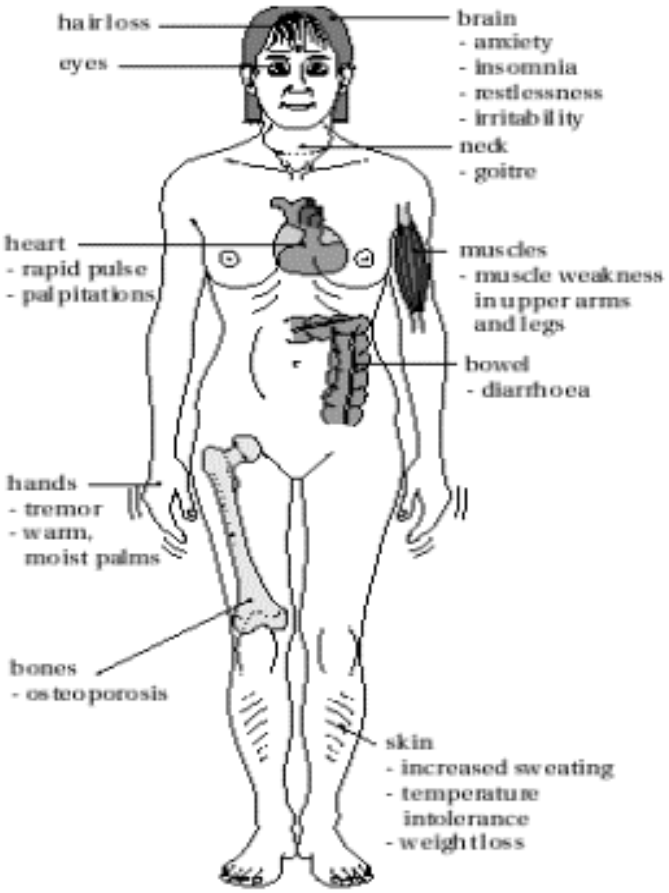


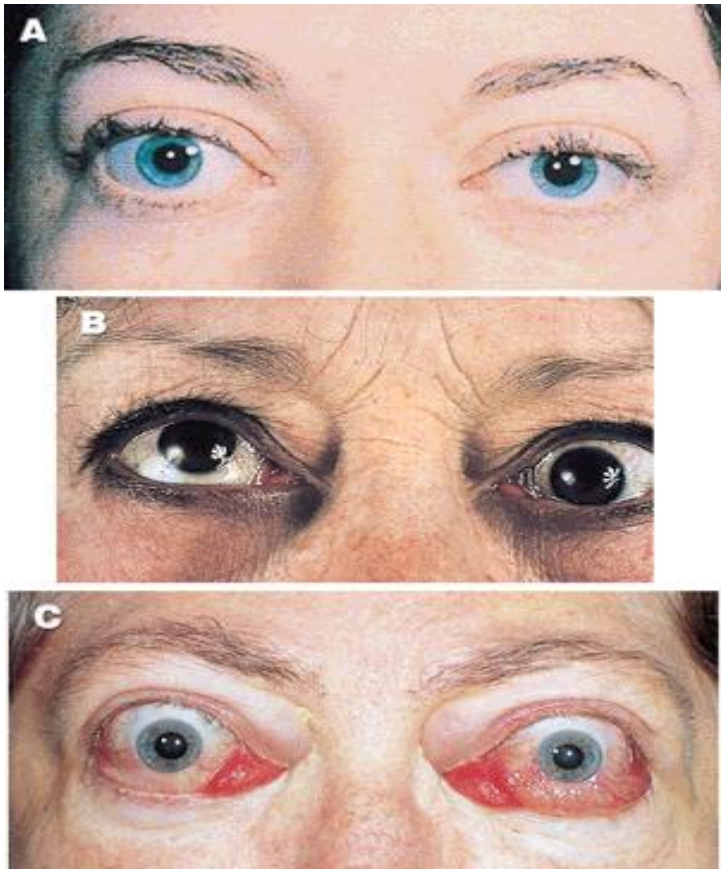
Figure 10.5 Goitre: (a) large; (b) massive

Figure 10.11 Testing ankle jerks (second method—see also page 372)
This method best demonstrates the 'hung-up' reflexes of hypothyroidism. Look for rapid dorsiflexion followed by slow plantar flexion after the tendon is tapped.

Typical clinical features

Hyperthyroidism



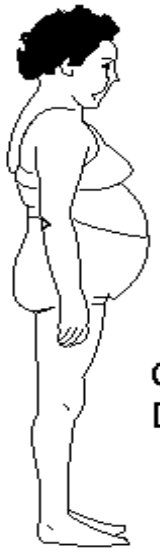


Graves ophthalmopathy

Figure 10.7 Thyrotoxicosis: thyroid stare and exophthalmos

Typical clinical features

Cushing´s syndrome



CUSHING'S
DISEASE

Moon face

Facio-truncal obesity

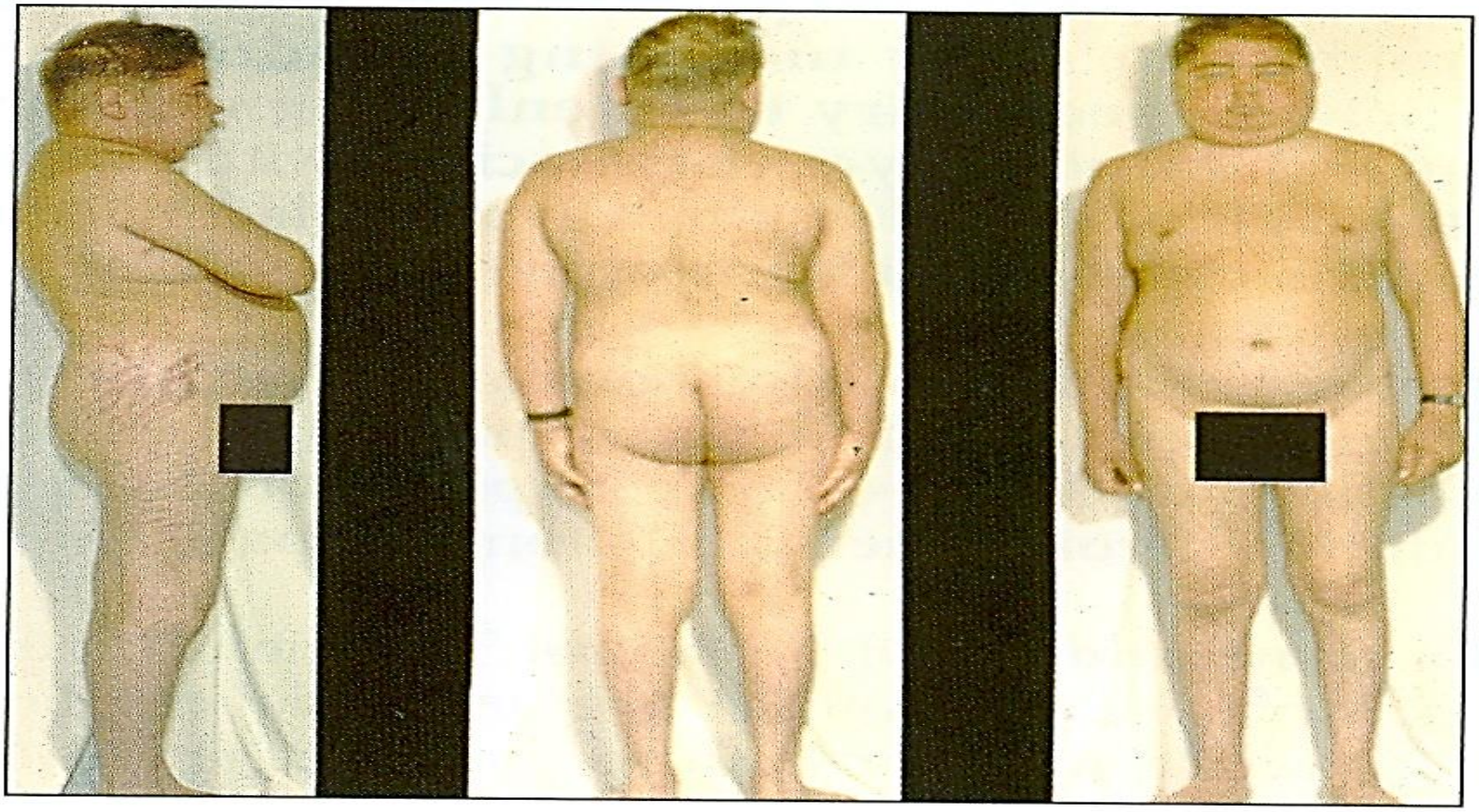


Figure 10.12 Buffalo hump and central obesity in Cushing's syndrome
(From McDonald FS, ed., *Mayo Clinic images in internal medicine*, with permission. © Mayo Clinic Scientific Press and CRC Press.)

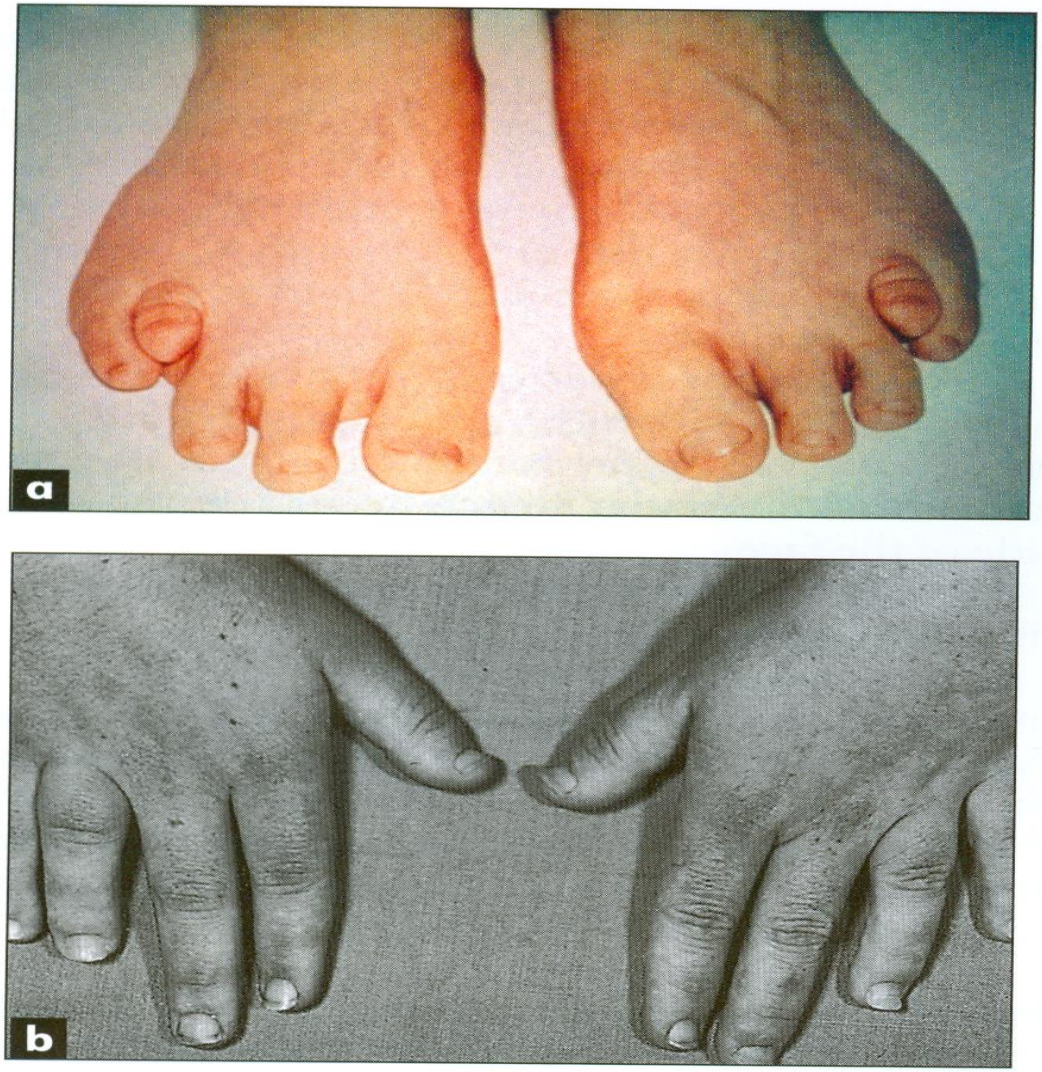


Figure 10.14 Pseudohypoparathyroidism: (a) feet; (b) hands
(From McDonald FS, ed., *Mayo Clinic images in internal medicine*, with permission. © Mayo Clinic Scientific Press and CRC Press.)

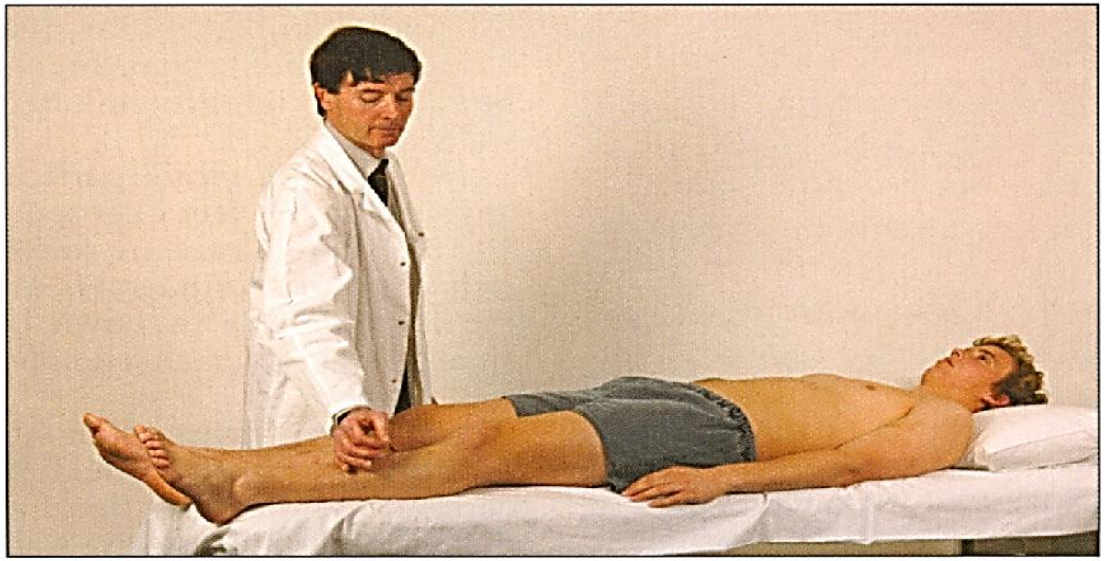


Figure 10.17 Diabetes mellitus

Lying

1. **General inspection**
   Weight—obesity
   Hydration
   Endocrine facies
   Pigmentation—haemochromatosis, etc
2. **Legs**
   Inspect
   - Skin—necrobiosis, hair loss, infection, pigmented scars, atrophy, ulceration, injection sites
   - Muscle wasting

   Palpate
   - Temperature of feet (cold, blue due to 'small' or 'large' vessel disease)
   - Peripheral pulses

   Femoral (auscultate)
   Popliteal
   Posterior tibial
   Dorsalis pedis
3. **Arms**
   Inspect
   - Injection sites
   - Skin lesions

   Pulse
4. **Eyes**
   Fundi—cataracts, rubeosis, retinal disease
   III nerve palsy, etc
5. **Mouth**
   Monilia
   Infection
6. **Neck**
   Carotid arteries—palpate, auscultate
7. **Chest**
   Signs of infection
8. **Abdomen**
   Liver—fat infiltration; rarely haemochromatosis
   Neurological assessment
   - Femoral nerve mononeuritis
   - Peripheral neuropathy
9. **Other**
   Urine analysis—glycosuria, ketones, proteinuria
   Blood pressure—lying and standing
   Oedema

Figure 148 Eruptive xanthomata. Type V hyperlipoproteinemia with an increase in very-low-density lipoproteins (VLDLs) and chylomicrons is often associated with glucose intolerance. This lipoprotein abnormality is accentuated by obesity and alcohol consumption, and may lead to acute pancreatitis and peripheral neuropathy

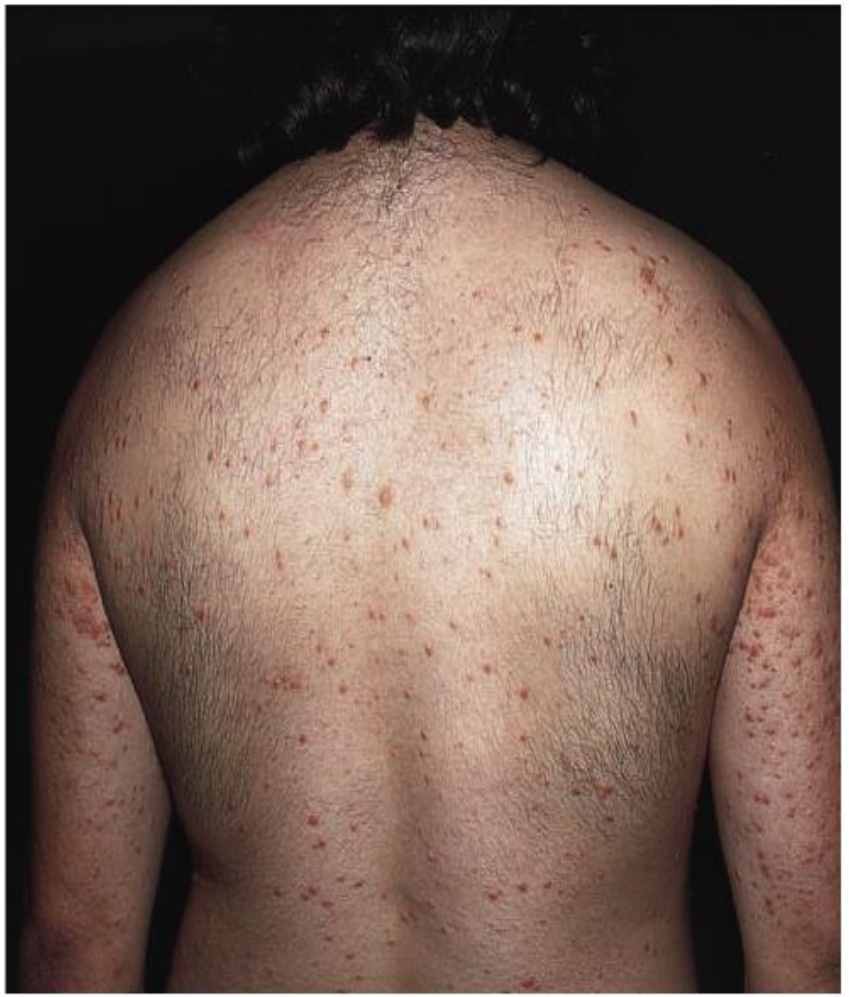


Figure 149 Massive eruptive xanthomata in a young man with type 2 diabetes mellitus

Figure 143 Acanthosis nigricans is uncommon. These brown hyperkeratotic plaques with a velvety surface occur most frequently in the axillae and flexures, and on the neck. Acanthosis is associated with insulin resistance caused by genetic defects in the insulin receptor or postreceptor function, or the presence of antibodies to the insulin receptor

Figure 106 This diabetic patient has an ulnar neuropathy. Such entrapment neuropathies are commonly seen in diabetic patients, the commonest being carpal tunnel syndrome. It has been postulated that diabetic nerves may be more susceptible to mechanical injury

Figure 140 Diabetic dermopathy. These pigmented pretibial patches are often seen in diabetic patients, but are not pathognomonic of the disease. There is a male preponderance and the lesions are discrete, atrophic, scaly or hyperpigmented. The underlying cause is not known

Figure 139 Granuloma annulare. Although this skin condition is occasionally seen in diabetic patients, several large studies have failed to reveal a significant association between the two disorders, both of which are relatively common

Figure 137 A typical lesion of necrobiosis lipoic
with yellow atrophic centers and an erythematous
size, and are often multiple and bilateral. Necrobic

Figure 138 Necrobiosis may become severe and ulcerative, causing great distress in affected patients. Spontaneous regression may occur and treatment tends to be unsatisfactory. Skin grafts may become complicated by recurrence within the graft or at an adjacent site

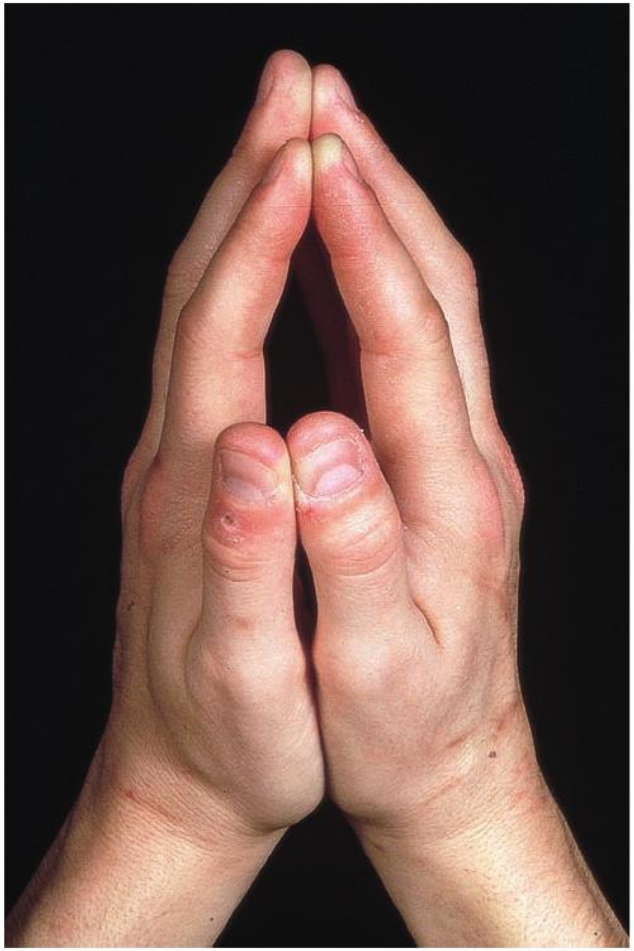


Figure 150 Diabetic cheiroarthropathy or limited joint mobility is characterized by an inability to extend fully the metacarpophalangeal and proximal interphalangeal joints when the tips of the fingers and palms of the hands are opposed in the so-called prayer sign. Although it may be seen in adult-onset type 1 and 2 diabetes mellitus (DM), it is most commonly seen in children and young adults with type 1 DM. The development of this abnormality is linked to the duration of diabetes. When present, other diabetic complications are likely to coexist

Figure 151 Dupuytren's contracture is common in patients with diabetes mellitus. Conversely, in patients presenting with Dupuytren's contracture, a high prevalence of diabetes is found. The exact nature of the link between the two conditions remains unclear

Figure 10.20 Charcot's joint of left knee

Figure 105 Diabetic right third cranial nerve palsy. The right eye is deviated outwards and downwards, and there is associated ptosis. Pupillary sparing is often encountered. Third nerve palsy is the most commonly seen cranial neuropathy of diabetes, although fourth, sixth and seventh nerve lesions have also been reported as well as intercostal and phrenic nerve lesions. These lesions usually improve over time

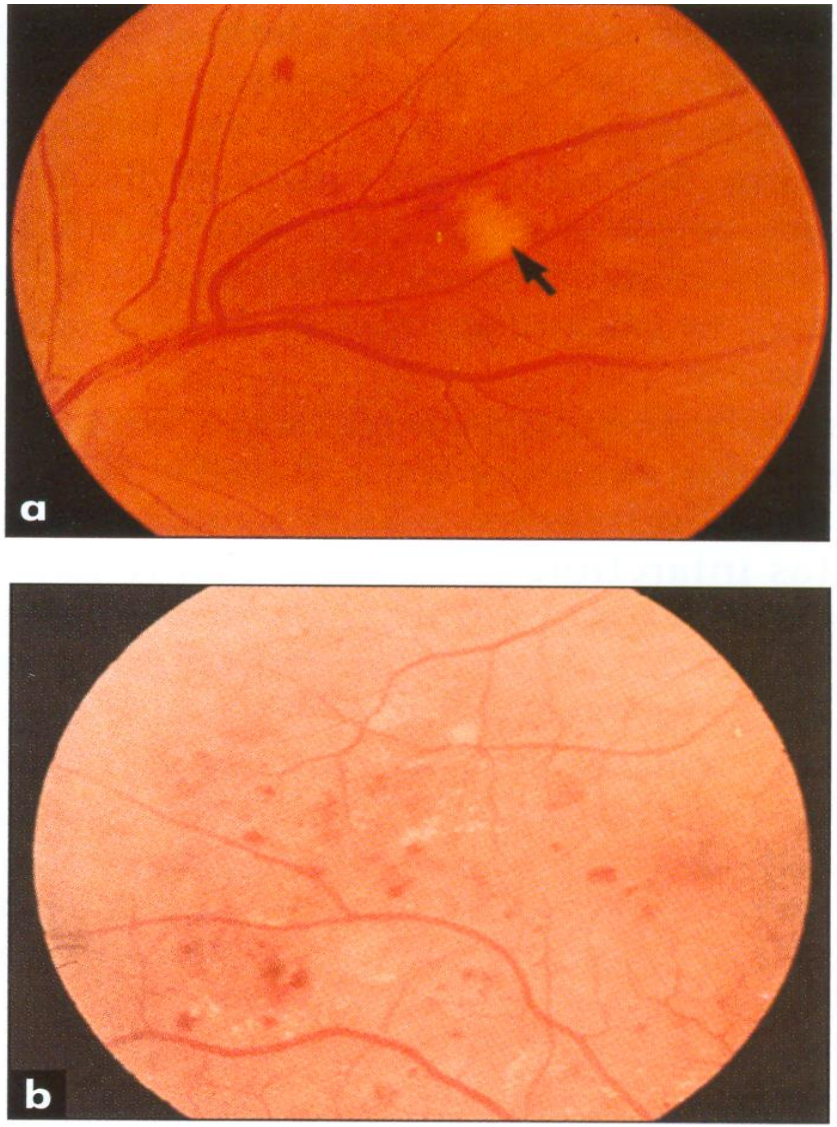


Figure 10.22 Diabetic retinopathy
(a) Soft exudate (arrow) and small haemorrhages.
(b) Microaneurysms (dots), retinal haemorrhages (blots) and hard yellow exudates.

Figure 87 Serious diabetic retinopathy with venous irregularities, blot hemorrhages, intraretinal microvascular abnormalities, large cottonwool spots and extensive areas of hard exudates

Figure 83 Background diabetic retinopathy with occasional scattered microaneurysms and dot hemorrhages

Figure 93 Extensive peripheral proliferative retinopathy with venous beading and blot hemorrhages. New vessels usually originate from a major vein and adopt a branching pattern. Proliferative retinopathy is the most common sight-threatening complication of type 1 diabetes mellitus (DM), with visual loss being due to breakage of vessels leading to preretinal or vitreous hemorrhage. It is always accompanied by other diabetic lesions and is treatable by laser photocoagulation. It is less common in type 2 DM (where exudative maculopathy is the most common cause of visual loss)

Figure 96 Vitreous hemorrhage has occurred despite extensive laser photocoagulation. The hemorrhage may clear but, if it fails to do so or recurrent hemorrhage ensues, visual loss is inevitable and vitreoretinal surgery may be indicated

DIABETIC FOOT EXAMINATION

Introduction

1. Wash hands
2. Introduce yourself
3. Confirm patient details – *name / DOB*
4. Explain the examination
5. Gain consent
6. Position patient on bed at 45°
7. Expose patient's lower legs & feet

Gather equipment

1. Monofilament
2. Tuning fork *(128hz)*
3. Tendon hammer

INSPECTION

Inspect legs & feet thoroughly, lifting legs up to see underneath & ensuring to look between toes…

Colour – pallor / cyanosis /erythema *(e.g. cellulitis / ischaemia)*

Inspect behind legs for ulcers…

Skin: Dry / shiny / hair loss – peripheral vascular disease - Eczema / haemosiderin staining – venous disease

Venous ulcers – moderate to no pain – larger /shallow – associated with venous insufficiency / varicose veins

Arterial ulcers – very painful – deep punched out appearance – associated with diabetes mellitus / peripheral vascular disease

Swelling:

Oedema – – *e.g. venous insufficiency / heart failure*

Deep vein thrombosis – *tender on palpation*

Calluses – may indicate incorrectly fitting shoes

Venous filling – *guttering of veins / reduced visibility suggests PVD*

Deformity caused by neuropathy *(e.g. Charcot arthropathy)*

Palpation

Temperature – cool *(e.g. PVD)* / hot *(e.g. cellulitis)*

Capillary refill – normal = < 2 seconds – *prolongation suggests PVD*

Pulses:

Dorsalis pedis artery – *lateral to EHL tendon*

Posterior tibial artery – *posterior & inferior to medial malleolus*

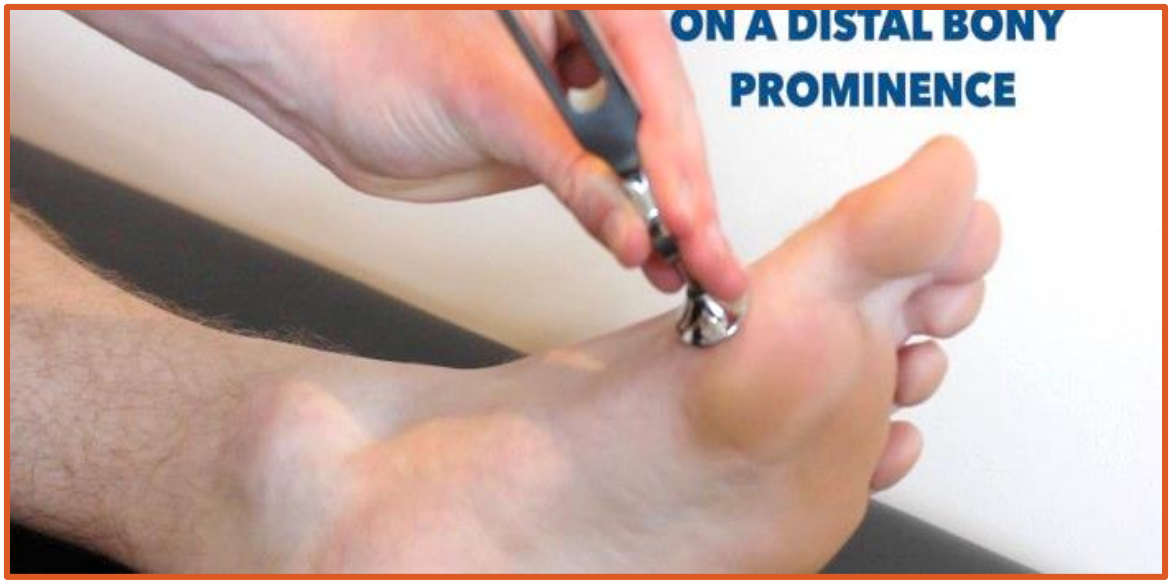
Sensation

Monofilament

... Compare between feet

Vibration sensation

- Ask patient to close their eyes
- Tap a 128hz tuning fork…
- Place onto patient's sternum & confirm patient can feel it buzzing
- Ask patient to tell you when they can feel it on their foot & to tell you when it stops buzzing
- Place onto the distal phalanx of the great toe on each leg in turn
- If sensation is impaired, continue to assess more proximally – *e.g. proximal phalanx…*



Other tests to consider

If abnormalities in monofilament or vibration sensation are identified, consider carrying out further tests shown below…

Proprioception

- Hold the distal phalanx of the great toe by its sides…
- Demonstrate movement of the toe *"upwards"* & "*downwards"* to the patient (*whilst they watch)*
- Then ask patient to close their eyes & state if you are moving the toe up or down…
- If the patient is unable to correctly identify direction of movement, move to a more proximal joint *(ankle > knee > hip)*

Ankle jerk reflex

- ✓ Dorsi-flex the foot
- ✓ Tap tendon hammer over the achilles tendon…
- ✓ Observe the calf for contraction – *normal reflex*
- Ankle jerk reflex may be absent in advanced peripheral neuropathy…

Gait

- ✓ **Symmetry / balance**
- ✓ **Turning –** quick / slow / staggered
- ✓ **Abnormalities –** broad based gait / foot drop / antalgia

Examine footwear:

- ✓ **Note pattern of wear on soles –** asymmetrical wearing *– gait abnormality*
- ✓ **Ensure the shoes are the correct size for the patient**
- ✓ **Note holes / material inside the shoes that could cause foot injury**

Figure 10.18 Diabetic (neuropathic) ulcer
(From McDonald FS, ed., *Mayo Clinic images in internal medicine*, with permission. © Mayo Clinic Scientific Press and CRC Press.)


OMEGA
DE VILLE

در انتها در گزارش **معاينه تيروئيد** ذكر جنبه‌هاي زير الزامي است:

اندازه تيروئيد، ابعاد لوبها (آيا تيروئيد قابل لمس است؟ آيا علاوه بر قابل لمس بودن بزرگ مي‌باشد؟)

در صورت بزرگي تيروئيد، به چه صورتي بزرگ مي‌باشد؟ آيا منتشر است و يا بصورت ندولر و غيريكنواخت مي‌باشد؟

قوام تيروئيد چگونه است؟ (نرم، سفت و يا سخت؟)

آيا تيروئيد به راحتي با بلع حركت مي‌كند يا خير؟

آيا در لمس تيروئيد مناطق دردناك و حساس به دست مي‌خورند؟

در صورت بزرگي تيروئيد آيا در سمع بررسي شنيده مي‌شود؟

در صورت لمس ندول، مشخصات ندول شامل اندازه، قوام، قابليت حركت يا چسبندگي و دردناكي مي‌بايست ذكر شوند.

همچنين در صورت وجود لنفادنوپاتي و يا انحراف تراشه ثبت آنها كمك فراواني به فرآيند تشخيص بيماريهاي تيروئيد به خصوص ندولهاي تيروئيد خواهد نمود.

درجه حرارت بدن: افزايش خفيف تا متوسط درجه حرارت بدن در زمينه طوفان تيروئيدي، بيماري آديسون و اختلالات مركز تنظيم درجه حرارت هيپوتالاموس به وجود خواهد آمد، بلعكس هيپوتيروئيديسم شديد و هيپوگليسمي باعث هيپوترمي مي‌شوند.

پوست: هيپرپيگمانتاسيون پوستي مخاطي به خصوص در نواحي چين‌ها و مناطق تحت فشار و مخاط لب و دهان و چشم قوياً شك به بيماري آديسون را برمي‌انگيزد. مشاهده آكانتوزيس نيگريكانس كه مناطق هيپرپيگمانته و هيپرتروفيه پوستي در نواحي زير بغل و پشت گردن مي‌باشد نشانه‌اي از چاقي، كوشينگ، آكرومگالي و يا ديابت تيپ II خواهد بود.

وجود موهاي زبر مردانه در صورت و بدن خانم‌ها نيز مي‌تواند به نفع بعضي اختلالات غددي مانند تومورهاي تخمداني يا آدرنال كه ترشحات آندروژني دارند، هيپرپلازي مادرزادي آدرنال، كوشينگ و يا سندرم تخمدان پلي‌كيستيك باشد.

خشكي و خشن شدن پوست حاكي از اختلالات هورموني مانند هيپوتيروئيديسم و يا هيپوپاراتيروئيديسم بوده و بلعكس پوست گرم و مرطوب و تعريق فراوان حاكي از پركاري غده تيروئيد مي‌باشد.
مشاهده استرياهاي بنفش رگ روي پوست شكم و پهلوها، پوست نازك و شكننده، وجود خونريزي‌هاي زيرپوستي به نام اكيموز نيز مطرح كننده سندرم كوشينگ مي‌باشد.

گوش، حلق و بيني: هيپرتروفي و بزرگي زبان، سينوس‌ها و استخوان‌هاي پيشاني و چانه در زمينه آكرومگالي و بزرگي زبان همچنين در بيماري هيپوتيروئيديسم ديده مي‌شود.

سيستم بينايي: معاينه كامل چشم شامل حركات، ميدان بينايي، شدت بينايي، بررسي لنز و شبكيه و فشار چشم از اهميت ويژه‌اي برخوردار است.

تاري ديد، خيرگي، قرمزي، التهاب و تورم چشم، پروپتوز يا بيرون‌زدگي چشم، فلج عضلات حركتي چشم، درد و حتي كاهش بينايي و نهايتاً از دست رفتن بينايي تماماً تحت عنوان افتالموپاتي گريوز از مشكلات عمده مبتلايان به اين نوع خاص پركاري غدذه تيروئيد است. بلعكس كم كاري تيروئيد سبب تورم نسج دور چشم (ادم پره اربيتال) و ريزش موهاي قسمت خارجي ابروها خواهد شد.

اختلالات ميدان بينايي، سردرد، دوبيني و يا فلج حركتي عضلات چشم مي‌توانند نشانه‌اي از تومورهاي بزرگ ناحيه هيپوفيز، هيپوتالاموس باشند. به علاوه اين تومورها مي‌توانند رفلكس مردمك را از بين ببرند. مشاهده كاتاراكت در معاينه مي‌تواند به نفع هيپوتيروئيديسم، ديابت كنترل نشده و يا هيپوپاراتيروئيديسم باشد.

افزايش فشار داخل چشم به دنبال سندرم كوشينگ و به خصوص ديابت قندي به طور شايع به وجود خواهد آمد. مشاهده شبكيه نيز اطلاعات زيادي در مورد بعضي بيماري‌ها مانند فشارخون مزمن يا حاد، و يا ديابت قندي به دست خواهد داد، به ويژه محو بودن حدود ديسك اپتيك (ادم پاپي) نشانه‌اي از افزايش فشار داخل جمجمه و به عنوان يك اورژانس پزشكي محسوب مي‌شود.

سيستم عصبي، عضلاني: معاينه سيستميك كامل سيستم عصبي حسي و حركتي و رفلكس‌ها و همچنين عضلات از اهميت بالايي برخوردار است. وجود نوروپاتي در زمينه ديابت قندي يافته بسيار شايعي است، ضعف عضلاني و وجود ميوپاتي در معاينه مي‌تواند به نفع اختلالاتي مانند كم كاري يا پركاري تيروئيد، بيماري كوشينگ و يا اختلالات متابوليسم كلسيم، فسفر باشد.

كاهش رفلكس‌هاي وتري عمقي به نفع كم كاري تيروئيد، ديابت قندي و يا كاهش سديم خون باشد، بلعكس به دنبال پركاري تيروئيد رفكس‌هاي عمقي تشديد خواهند يافت. در صورت مشاهده لرزش خفيف (fine tremor) در دست‌ها كه به حالت كشيده و به طرف جلو موازي با هم و كف دست به طرف زمين باشد، شك به پركاري غده تيروئيد خواهيم كرد.

سيستم اداري تناسلي: معاينه سيستم اداري تناسلي در هر دو جنس براي يافته اختلالات هورمون‌هاي جنسي و نيز وجود يا عدم وجود نشانه‌هاي بلوغ ضروري است. در خانم‌ها نشانه‌هاي افزايش هورمون‌هاي جنسي مردانه به صورت ريزش موهاي سر به فرم مردانه، كلفت شدن صدا، آكنه، عضلاني شدن بدن و بزرگي كليتوريس بروز خواهد كرد.

در آقايان كاهش هوزمون‌هاي مردانه به صورت كاهش رشد موهاي صورت، بزرگي پستان‌ها (ژينكوماستي) و آتروفي بيضه‌ها خواهد بود.

سيستم اسكلتي: افزايش بيش از اندازه رشد قدي به علت فقدان ترشح هورمون‌هاي جنسي و يا افزايش ترشح هورمون رشد و كاهش رشد قدي به دليل فقدان يا كمبود هورمون رشد، كم كاري غده تيروئيد و يا اختلالات متابوليسم كلسيم و فسفر رخ خواهد داد. بزرگي رشد انتهاها، چانه، بيني و پيشاني به نفع بيماري آكرومگالي و عدم تناسب رشد تنه به اندام‌ها نشانه‌اي از ديسژنزي‌هاي استخواني، ديسژنزي‌هاي گنادال و هيپوپاراتيروئيديسم كاذب مي‌باشد، به علاوه درد در لمس استخوان‌ها و به خصوص فقرات كمري و لگن مي‌تواند نشانه‌اي از استئومالاسي باشد.